Amendments to the Claims

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a multi-electrode neural stimulation system, a method for determining which electrodes are working well or poorly, including the steps of:

(a) providing a series of stimuli using each electrode, ~~and~~

(b) measuring the neural response to said stimuli using ~~implanted~~ said electrodes, said stimuli having different stimulus levels; ~~and~~

(c) calculating a value relating stimulus level to response level for each electrode; and~~.~~

(d) determining whether said electrode is working by comparing said electrode's value of step (c) with the values of step (c) for each electrode.

2. (Original) A method according to claim 1, wherein the electrodes used for measurement are one or more of the stimulating electrodes.

3. (Original) A method according to claim 1, wherein the system is an intra-cochlear prosthesis.

4. (Original) A method according to claim 3, wherein the neural response measured is the amplitude of evoked neural response.

5. (Original) A method for determining the relative responsiveness of electrodes in a multi-electrode intracochlear prosthesis, including the steps of

(a) measuring the amplitude of the evoked response to a set of stimuli at different stimulation levels for one of the electrodes in said prosthesis;

(b) calculating a value relating the evoked responses to the stimulus levels for each electrode;

(c) repeating steps (a) and (b) for each electrode for which data is required; and

(d) determining the relative responsiveness of the electrodes by comparing the values of step (b) for the tested electrodes.

6. (Original) A method according to claim 5, wherein step (b) is performed by deriving the slope of the best fit regression line on a plot of stimulus level against peak to peak amplitude of evoked response.

7. (Original) A method according to claim 6, wherein step (b) is performed by deriving the value of the peak to peak amplitude of said evoked response.

8. (Original) A method according to claim 5, wherein the relative responsiveness according to step (d) is used to construct an electrode map for selecting electrodes for stimulation.

9. (Original) A method according to claim 8, wherein the electrode map is modified in response also to the spectral distribution of the most responsive electrodes, so as to provide a more even distribution of electrodes selected for stimulation.

10. (Cancelled)

11. (New) A system for determining whether an electrode in a multi-electrode neural stimulation system comprising:

means for stimulating each electrode at different levels;

means for measuring the neural response to said stimuli using said electrodes;

means for calculating a value relating stimulus level to response level for each electrode; and

comparing means for determining whether said electrode is working by comparing said electrode's value of step (c) with the values of step (c) for each electrode.

12. (New) A system for determining the relative responsiveness of electrodes in a multi-electrode intracochlear prosthesis comprising:

means for measuring the amplitude of the evoked response to a set of stimuli at different stimulation levels for one of the electrodes in said prosthesis;

means for calculating a value relating the evoked responses to the stimulus levels for each electrode;

means for determining the relative responsiveness of the electrodes by comparing the values of step (b) for the tested electrodes.